



GTI ENERGY

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DOT PHMSA Public Quarterly Report

Date of Report: 1st Quarterly Report Ending December 31, 2022

Contract Number: 693JK32210004POTA

Prepared for: USDOT PHMSA

Project Title: Advancing Hydrogen Leak Detection and Quantification Technologies
Compatible with Hydrogen Blends

Prepared by: GTI Energy

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For quarterly period ending: December 31, 2022

1: Items Completed During this Quarterly Period:

No items outlined in Attachment #3, Technical and Deliverable Payable Milestone Schedule were completed during this reporting period due to delays in assembling the project team and holding a kickoff meeting. The kickoff meeting is scheduled for February 8th, and all future deliverables will be delivered on or before the due date outlined in the performance contract.

2: Items Not-Completed During this Quarterly Period:

The 1st quarterly status report was not delivered before December 31, 2022, and the Technical Advisory Panel (TAP) has not yet been finalized. The kickoff meeting is scheduled for February 8th and the TAP is expected to be finalized at that time.

3: Project Technical Status:

ACTIVITY: PROJECT SCOPING AND TECHNICAL ADVISORY PANEL (TAP)

Item Title: Notes of Internal Meetings Detailing any Project Scope Changes

Item Number: 1

Task Number: 1

An internal meeting with the project team leaders was first held on November 7th to construct a project roadmap and agree upon roles and responsibilities. At this meeting, rough outlines for the kickoff meeting with PHMSA and some cursory communication with future TAP members was accomplished.

A second internal meeting with an expanded project team was held on December 13th to identify field test locations and establish a TAP. The project team was then determined to be made of Chris Moore, Chris Ziolkowski, Nikolay Stepin, Jarrod Bullen, Jim Rutherford, May Kwan, and James Taff-Clay from GTI Energy with additional help from Jacob Melby and Jason Gu from SENSIT Technologies. A strong list of potential members for the TAP was formed with a few other members that have yet to be

confirmed. The project team also compiled a list of testing locations so outreach can begin with any relevant parties, the uncompleted list of potential sites was as follows: Entrust Solutions, Hawaii Gas, GTI Energy, New Mexico Gas, New Jersey (SJI), CenterPoint, and a nonconfirmed Dominion site.

Outreach will continue to specify roles in the TAP with any yet unconfirmed members, and the list of field testing locations will be expanded and vetted more fully before any finalization. The next quarterly report will contain information on the kickoff call as well as the technical literature document with the group's work on the various parts of the literature review.

ACTIVITY: FIRST QUARTERLY STATUS REPORT

Item Title: Submit First Quarterly Status Report

Item Number: 2

Task Number: 8

The first quarterly status report (this report) was not completed on time and will be submitted slightly behind schedule in February 2023.

ACTIVITY: PROJECT MANAGEMENT

Item Title: N/A

Item Number: N/A

Task Number: 9

During this quarter, GTI conducted contracting, project scheduling, budgeting, establishment of data management strategies, preparation of reports, and organization of required meetings.

4: Project Schedule –

The project schedule is shown below in Table 1, with the submittal time of this quarterly report outlined.

Table 1. Project Schedule

Task	Description	1 - Q4 2022	2 - Q1 2023	3 - Q2 2023	4 - Q3 2023	5 - Q4 2023	6 - Q1 2024	7 - Q2 2024	8 - Q3 2024	9 - Q4 2024	10 - Q1 2025	11 - Q2 2025	12 - Q3 2025
1	Project Scoping and TAP	█											
2	Literature Review	█											
3	Develop Evaluation Framework		█										
4	Laboratory Tests		█	█	█	█	█						
5	Develop New Hydrogen Sensing Schemes			█	█	█	█	█	█				
6	Field Tests					█	█	█	█	█	█		
7	Statistical Analysis and Final Report										█	█	█
8	Project Management	█											